

Applicant : Manfred Lenhart
Serial No. : 10/572,821
Page : 4

IN THE CLAIMS:

Please cancel Claim 12, amend Claims 1, 3, 5, 7, 17, 18, 20-23, and 25, and add new Claim 26 as follows:

1. (currently amended) A two-cylinder slurry pump for the continuous feeding of high-viscosity material, in particular, concrete, said pump comprising:

two feed cylinders;

a precharging tank;

a feed line, said feed cylinders for removing high-viscosity material from said pre-charging tank and delivering [[it]] the high-viscosity material to said feed line; and

a changeover valve having a pivotable diverter valve for switching between said first feed cylinder and said second feed cylinder, said diverter valve having an inlet opening assigned to said feed cylinders, a discharge opening assigned to said feed line, and a side facing said cylinders and comprising:

a hollow body having a cross-section that narrows from [[an]] said inlet opening assigned to said feed cylinders to [[a]] said discharge opening assigned to said feed line;

said hollow body being pivotably supported in the region of said discharge opening about a pivot axis and positionable for connecting at least one of said first feed cylinder and said second feed cylinder over its entire cross-section to said feed line in any position of said changeover valve; and

a support arrangement and a plate cam securely connected thereto are assigned to said diverter valve on said [[its]] side facing said cylinders of said diverter valve towards said cylinders, said plate cam including [[an]] a first opening forming said inlet opening of said diverter valve, and said plate cam further including a second an intake opening forming an intake opening arranged at a sufficient distance from said inlet opening to allow said cam plate to close cover an opening of one of said feed cylinders completely.

2. (previously presented) A slurry pump in accordance with claim 1, wherein said changeover valve includes a housing, said diverter valve being securely connected to a drive

Applicant : Manfred Lenhart
Serial No. : 10/572,821
Page : 5

shaft supported within said housing of said changeover valve, and said support for said drive shaft within said housing also serving as support for said diverter valve.

3. (currently amended) A slurry pump in accordance with claim 1, wherein said diverter valve and said plate cam has have a central position wherein both of said cylinders are connected to said feed line at the same time and said plate cam can be pivoted from said central position into opposite directions through 120° in each case so as to position said intake opening in front of one of said feed cylinders one at a time.
4. (previously presented) A slurry pump in accordance with claim 1, wherein said inlet opening comprises a kidney-shaped inlet opening at the cylinder side, said kidney-shaped inlet opening extending across 120° along a circular arc and being rounded off at both its ends, and said intake opening, being on the same circumference as said kidney-shaped opening and being offset symmetrically through 120° with respect to both ends of said inlet opening.
5. (currently amended) A slurry pump in accordance with claim 1, wherein said feed cylinders each has have a diameter, said intake opening comprising a bore in said plate cam, and said bore having a diameter that corresponds at least to said diameters of said feed cylinders.
6. (previously presented) A slurry pump in accordance with claim 1, wherein said intake opening in said plate cam corresponds at least to the diameter of one of said feed cylinders.
7. (currently amended) A slurry pump in accordance with claim 1, wherein said kidney-shaped inlet opening is enclosed by a cutting ring.
8. (previously presented) A slurry pump in accordance with claim 1, further comprises at least one wear plate arranged on a lateral surface of said housing, said surface facing towards said diverter valve.

Applicant : Manfred Lenhart
Serial No. : 10/572,821
Page : 6

9. (previously presented) A slurry pump in accordance with claim 1, wherein said plate cam is slidably supported at its circumferential edge on a wall of said housing of said changeover valve.

10. (previously presented) A slurry pump in accordance with claim 9, wherein said plate cam has a circumferential support surface, said circumferential support surface providing a wrap-around sliding seal.

11. (previously presented) A slurry pump in accordance with claim 8, wherein said plate cam is slidably supported on said wear plate.

12. (cancelled)

13. (previously presented) A slurry pump in accordance with claim 1, wherein said diverter valve is driven via a drive shaft by means of drive cylinders via a lever or by means of a rotary drive directly for the purpose of pivoting movements.

14. (previously presented) A slurry pump in accordance with claim 13, wherein at least said drive shaft is arranged between said feed cylinders.

15. (previously presented) A slurry pump in accordance with claim 1, wherein said plate cam is connected to said diverter valve in a detachable manner by means of screws or in a secure manner by welding.

16. (previously presented) A slurry pump in accordance with claim 1, wherein the openings of said feed cylinders open out near to the lower base of said precharging tank beneath said pivot axis of said diverter valve.

17. (currently amended) A process for controlling a slurry pump, said pump having two feed cylinders each with a ram open on one side, rams, and a changeover valve having a movable diverter valve that can be controlled in a manner adapted to the movement of the rams, the

Applicant : Manfred Lenhart
Serial No. : 10/572,821
Page : 7

diverter valve having an inlet opening and a discharge opening, the inlet opening of said diverter valve being designed for simultaneously closing covering both feed cylinders in at least one position of said diverter valve), and the discharge opening of said diverter valve communicating with a feed line, and said diverter valve being provided with a plat cam with sealing faces that close ~~the opening of~~ at least one feed cylinder in predetermined positions of said diverter valve, said method comprising:

closing ~~the opening of~~ each feed cylinder with the sealing face of [[a]] the plate cam that runs ahead of the ~~inlet opening~~ of said diverter valve ~~at the start of the pump lift of the ram;~~

performing a precompression stroke with the ram of one feed cylinder while operating the ram of the other feed cylinder in a discharge pump lift mode;

controlling both rams [[in]] so that they are advanced in parallel in the same direction to define a synchronous phase while both cylinder openings are covered temporarily at the same time by the inlet opening so as to match one another such that the amount of high-viscosity material simultaneously pumped by both rams is at least roughly the same as if it were being fed by just one ram during the intake stroke of the other ram.

18. (currently amended) A process in accordance with claim 17, further comprising providing each discharge mode pump lift of a ram at least one precompression phase where the high-viscosity material is compressed, a first synchronous phase where both rams advance in parallel in the same direction, a pump phase where the ram advances at full speed while the feed cylinder of the other ram is closed, and a second synchronous phase where both rams advance in parallel in the same direction.

19. (previously presented) A process in accordance with claim 17, further comprising driving both rams at reduced speed and pump capacity during the synchronous phases.

20. (currently amended) A process in accordance with claim 19, further comprising driving both rams at the same speed during the synchronous phases, in particular at half the normal speed of its further pump lift during the synchronous phases.

Applicant : Manfred Lenhart
Serial No. : 10/572,821
Page : 8

21. (currently amended) A process in accordance with claim 17, further comprising providing each intake stroke of a ram a start-up ~~ramp speed~~ and a rundown ~~ramp speed~~ at a lower speed.

22. (currently amended) A process in accordance with claim 17, further comprising executing the intake stroke of each ram faster than its discharge stroke pump lift between a relaxation phase and a precompression phase.

23. (currently amended) A process in accordance with claim 17, further comprising delaying or temporarily stopping the diverter valve during the a precompression phase where the high-viscosity material is compressed prior to flowing into the diverter valve.

24. (previously presented) A process in accordance with claim 17, further comprising delaying or temporarily stopping the diverter valve during the synchronous phase.

25. (currently amended) A process in accordance with claim 17, further comprising delaying or temporarily stopping the diverter valve during [[the]] a relaxation phase.

26. (new) The process in accordance with claim 20, further comprising driving both rams at half the normal speed of the rams' discharge mode during the synchronous phase.